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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,468	01/29/2004	Kheng Chiong Tay	07044.0002	3727
22852	7590	03/03/2009		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER REAMES, MATTHEW L.	
			ART UNIT 2893	PAPER NUMBER
			MAIL DATE 03/03/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/766,468

**Applicant(s)**

TAY ET AL.

**Examiner**

Matthew Reames

**Art Unit**

2893

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6 and 9-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-4, 6 and 9-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Affidavit filed on 12/5/2008 under 37 CFR 1.131 has been considered but is ineffective to overcome the Hsu reference.
2. The evidence submitted is insufficient to establish diligence from a date prior to the date of reduction to practice of the Hsu reference to either a constructive reduction to practice or an actual reduction to practice. It is unclear what actions were taken between July 3, 2001 and January 24, 2004.
3. The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Hsu reference. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). The submitted Malaysian patent applications appears to have different drawings than the U.S. application, moreover there is no specification associated with the Malaysian application therefore it is unclear what is actually contained in the document.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6, and 9-23 are rejected under 35 U.S.C. 103(a) as obvious over Hsu in view of Honda (20030178711) or Roberts (previously cited)..

a. As to c claims 1, 10 17-23, Hsu teaches an optoelectronic (see e.g. item 20) with element forming the base of the structure (see items 19,16,18), and a opaque plastic (item 30) forming a housing in conjunction with the transparent material (item 51). With the opaque material having a cavity; with the base protruding from the all the middles of the sides and the bottom (see e.g. fig. 11 and 12), wherein they are not covered by the encapsulant thus the protrude from the encapsulant. Hsu further teaches wherein each of the bases protrude from the bottom and from one of the two other sides (see e.g. fig. 11 and 12) with each base section flush (identical dimensions outside the housing) and one base section larger than the other towards the middle (see fig. 11 and 12) with the optoelectronic component on the larger of the two base sections.

Hsu does not teach where the base extends past the bottom surface and the two other side surface of the housing.

However, Roberts and Honda teach using a protruding portion to dissipate heat (see e.g. Honda item 6 and Roberts item 204).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed the devices of Hsu such that all four sides and the bottom portion of the lead frame protrude from the housing.

One would have been so motivated in order to enable heat to be quickly dissipated from the device (See e.g. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies in the joint, and a plurality of "ribs" projecting outwardly from each side of the web into one of the adjacent concrete slabs. The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced).

- b. As to claims 2 and 10, Hsu teaches filling the cavity with a transparent resin (see item 50).
- c. As to claim 3 and 13, Hsu teaches a wire (see e.g. fig. 12).
- d. As to claim 4 and 14, Hsu mounting (see e.g. item 18) can be used for connecting to external sub-systems such as PCBs. Applicant is reminded this is an intended use and so long as Hsu can perform the claimed feature the claim is anticipated.

- e. As to claim 6, Hsu base material is outside the plastic material (not covered see e.g. figs.).
- f. As to claims 9 and 12, Hsu device has no lead formation (see e.g. figs.).
- g. As to claim 15, Hsu base section can be used for heat dissipation. Applicant is reminded this is an intended use and so long as Hsu can perform the claimed feature the claim is anticipated.
- f. As to claim 16, Hsu teaches the base extending the entire length (see e.g. figs.).

***Response to Arguments***

3. Applicant's arguments filed 12/5/2008 have been fully considered but they are not persuasive. Applicant argues that Hsu teaches away from protrusion portions. Applicant cites paragraph 3 which recites:

Besides, a protrudent portion of the leads out of the encapsulant is in the shape of a thin bar, so that the thermal conductivity of the above-mentioned conventional LED package is very poor and further improvement is required.

- It is held that Hsu is merely further describing the lead frame since in paragraph 2 recites:

By means of a molding technique, the LED dies are then respectively encased by a dome-shaped epoxy resin encapsulant with the **metallic leads partially projecting**

**out** of the respective encapsulant and the cross bar is exposed outside the encapsulants.

Thus reading the two paragraphs in context Hsu teaches that the frame contain a protruding portion as well, further the frame is in the shape of a thin bar. Since it is the shape of a thin bar the heat dissipation is poor. The poor dissipation is not because poor because of the protrusions but because of the thin lead frame. In fact Hsu states the reason for the better thermal dissipation is because the plate is large and not thin (see e.g. paragraph 26). Hsu is merely transitioning from the encapsulent, previously mention in paragraph 3, back to the lead frame.

Further applicant points to step 6 paragraph 23 and figs 11 and 12, to suggest that Hsu only teaches a flush cut. This is not persuasive, paragraph 24 indicates the cuts may be varied:

Cut the frame 10 according to the **size of each of the cell 11, or smaller**, by cutting out the lateral bars 12 and 13 and the dividing bars 14 and 15 of the frame 10 such that LED packages 60 are made.

No where in the specification does the Hsu limit the cut to a flush cut with the housing (base 51). In fact observing figure 10 it appear if the frames where cut by

the cell length there maybe a portion inherently protruding  
sin it appears the arms extend slightly longer than the  
base. Applicant is reminded that drawings are not  
necessarily drawn to scale, nor do they represent all  
possible configurations.

Therefore all rejections are deemed proper and  
maintained.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time  
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE  
MONTHS from the mailing date of this action. In the event a first reply is filed within  
TWO MONTHS of the mailing date of this final action and the advisory action is not  
mailed until after the end of the THREE-MONTH shortened statutory period, then the  
shortened statutory period will expire on the date the advisory action is mailed, and any  
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of  
the advisory action. In no event, however, will the statutory period for reply expire later  
than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Matthew Reames whose telephone number is (571)  
272-2408. The examiner can normally be reached on M-Th 6:00 am-4:30 pm.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Davienne Monbleau can be reached on (571)272-1945. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MLR/

/Jack Chen/

Primary Examiner, Art Unit 2893